COPING WITH A CHANGING WORLD: THE OUTLOOK FOR DAIRY

James J. Miller

International Price Prospects Dim

International dairy markets had an unsettled year in 2001. Prices collapsed during the last quarter of the year as the European Union (EU) recovered from dislocations caused by the foot-and-mouth disease outbreak, output grew once again in Oceania, the U.S. dollar was strong, and Argentina's economic collapse prompted traders to try to sell as much as possible right away. Prices are not expected to show much recovery until at least the second half of 2002.

Export supplies have been generally adequate. Milk production in the EU was about unchanged in 2001 as only a little output was lost to disease controls. EU production in 2002 may slip slightly because of lower output in the Netherlands, but the production quotas will be generally filled or a bit over-filled. Milk production continues to grow in Oceania. Australian output was a little weak during the second half of the 2000-01 season and again during the first part of their new season. However, New Zealand production has continued to grow, mostly because of more cows. Milk production in 2002 is also expected to increase in North America, eastern Europe, and many Asian and South American countries.

Nonfat dry milk prices broke sharply last autumn, after staying above $2,000 per ton since mid-2000. Strong Asian demand and relatively modest export supplies had been the most commonly cited reasons for market tightness. Even so, the needs of buyers seemed to be fairly easily met. Modest unsubsidized exports from the United States apparently satisfied this nominally tight market fairly easily. Slippage in EU domestic markets, seasonal production increases in Oceania, and lower import demand from a few countries dropped prices about $500 per ton over a few months. Ample supplies and some general economic weakness are expected to forestall much recovery until the second half of 2002. In fact, prices may not yet have reached bottom.

Butter prices started 2001 weak. Demand from Russia and the Middle East-North Africa was too sluggish to absorb even moderate export supplies. Prices picked up a little in late spring and summer, in large part because of over-Tariff-Rate-Quota (TRQ) imports by the United States. Recent events apparently dampened butter demand in the Middle East-North Africa region, as Ramadan demand was noticeably less this year and more recent sales stayed sluggish. Russia reportedly has been importing more from other East European countries, particularly Ukraine, but imports from outside the region have been at best unchanged. Unless an unexpected source of demand emerges, butter prices are not likely to improve much this year, particularly if economic weakness triggers any shift from whole milk powder to skim milk powder.

Production Surge To Lower U.S. Prices

From 1998 until the summer of 2001, the storyline for domestic dairy markets was simple: Was production keeping up with the extraordinary demand? Economic softening and the so far very muted

response in milk production add complexity to this year's story. We expect that recovery in milk per cow will boost milk production, but that still fairly brisk demand will limit price drops. However, neither supply nor demand is showing clear signs of direction.

Milk cow numbers slipped steadily through the first half of 2001, mostly as a result of farm exits triggered by the relatively low milk prices of 2000. Cow numbers stabilized during the second half at levels more than 1 percent below a year earlier. Strong milk prices provided considerable incentive to reverse the declines in milk cow numbers, but sufficient replacement heifers were not available. In fact, some of the apparent second-half stability may have come from retaining some lower producing cows in the milking herd. High prices for dairy-quality alfalfa hay also may have deterred some herd expansions.

Milk cow numbers are expected to decline in 2002--but only quite modestly. The January 1 cattle inventory showed producers had a few more heifers that they expected to enter the milking herd during the following year than they had a year earlier. While welcome, these extra heifers may be mostly absorbed in simple replacement of inferior cows not culled in 2001. Tight heifer and hay markets probably will continue to inhibit expanding herds. Farm exits are not expected to pick up much in 2002, even though returns will be down considerably from the strong 2001 levels. Returns over concentrate costs will stay well above the low returns of 2000 or 1997. For the year, milk cow numbers are projected to average fractionally below 2001's 9.12 million.

Milk per cow was battered by a number of factors in 2001, resulting in a highly unusual fractional decline for the year. Growth in the western dairy herd and recovery in alfalfa exports put considerable pressure on western supplies of dairy-quality alfalfa hay, and forage quality elsewhere was erratic. Stress from winter weather in early 2001 was followed by more-than-normal summer heat stress, even though average temperatures were far from extreme during either season. Lastly, the heifer situation undoubtedly contributed to retention, at least temporarily, of inferior cows.

Milk per cow should recover in 2002 if weather stress can be avoided. The feed situation overall should support substantial recovery in milk per cow. Concentrate feed prices are expected to stay relatively low, continuing the unbroken string of high milk-feed price ratios enjoyed since 1998. In addition, the alfalfa hay situation, although not favorable, is a little better than last summer. Troubles in the Japanese cattle industry have recently eased export pressure on western alfalfa supplies, while total hay stocks at the start of December were up from a year earlier. Although abnormal culling still may keep production per cow from returning to the long-run trend, milk per cow is expected to grow about 3 percent from 2001's depressed level.

Milk production is expected to increase 2 to 3 percent in 2002, erasing 2001's decline of 1 percent. The 2001 slippage, to just more than 165 billion pounds, followed large increases in 1999 and 2000.

U.S. Market More Isolated in 2002

U.S. imports and exports may both decline in 2002. Lower expected domestic butter and cheese prices will not provide the incentive to import as much milkfat in excess of the TRQ's. Even so, some over-TRQ imports are likely unless international butter prices recover faster than expected. Also, TRQ fill rates are likely to be fairly high again in 2002. On the export side, commercial exports of nonfat dry milk are not likely to be significant this year because of lower international prices. Whey exports may also be a bit sluggish, although commercial cheese exports may continue their slow growth. Calendar

year exports of nonfat dry milk under the Dairy Export Incentive Program (DEIP) will again correspond roughly to the WTO limit.

Commercial stocks of milkfat were slightly above a year earlier at the start of 2002. Butter holdings were considerably higher, while American cheese stocks were down sharply. Overall, beginning stocks probably were comfortable in light of the industry's increased willingness to carry stocks and indications that post-holiday pipeline holdings were quite depleted. Although stocks of skim solids were down significantly from a year earlier, nonfat dry milk holdings remained at the possibly excessive levels of recent years. Manufacturers' stocks at the start of the year represented 1½ months of commercial use and only moderate DEIP shipments are planned for this winter.

Net removals of nonfat dry milk under the dairy price support program decreased more than a fourth in 2001, as both purchases and DEIP shipments were smaller. Even so, the surplus of skim solids remained sizable, and Government purchases of nonfat dry milk exceeded their ability to use them. At the start of the year, Government powder stocks were up almost 300 million pounds from a year earlier and equaled most of a year's commercial use of nonfat dry milk. In 2002, purchases are expected to decrease a bit because of expected continued growth in commercial use of skim solids.

Dairy Demand Resilient

Demand for milkfat was brisk through most of 2001, extending the extraordinary period that began in 1998. Record amounts were sold despite very high prices. Even the disruptions of late 2001 had only a modest dampening effect on sales. Cheese, butter, and fluid cream again were strong. Strong cheese demand also contributed to demand for skim solids. But, skim solids demand overall was not as strong as for milkfat, even though sales grew about 2 percent on a daily average basis. Except for nonfat dry milk, most other uses were lower in spite of stable or lower prices for separated skim solids.

Demand for dairy products is projected to grow less in 2002 than in recent years. Recession effects will slow increases in milkfat demand. However, such slowing is likely to be quite modest and would be from a very strong level. The recession has given indications that it may well be mild and short. In fact, the recession might even help demand for such products as fluid milk and part-skim products. Demand is expected to absorb the projected jump in milk production with only a moderate drop in prices.

Farm milk prices in 2002 are expected to drop $1.50 to $2 per cwt from 2001's level of almost $15. Prices in 2002 are projected to stay well above those of 2000. A very wide gap between the value of milk for cheese and for butter-powder persisted through 2000 and part of 2001. However, these values moved together in mid-2001 and are expected to stay close during 2002.

Retail prices of dairy products are projected to run near recent levels during 2002, posting an average increase of 2 to 3 percent from last year. The farm-to-retail price spread probably will widen considerably following 2001's contraction.

The general patterns projected for the next 10 years remain much the same. Milk supply is expected to grow very slowly. Fueled by further growth in cheese demand, domestic demand for dairy products will also grow slowly. Following a period of sluggish prices during the next couple years, nominal farm milk prices are expected to trend upward slowly. The U.S. market is projected to remain largely isolated from international markets by domestic prices too high to export much without subsidy but too low to import much over TRQ's in most years.

Key Domestic Market Uncertainties

Demand would have to be prominent in a list of key uncertainties for domestic dairy markets in the short and intermediate runs. The period just ended probably had uniquely robust demand. American consumers had the money and the inclination to pamper themselves. They not only ate out a lot but ordered indulgent foods without too much thought for the tab. At home, they were behaving similarly, buying more prepared foods and allowing themselves all kinds of little treats. Concern with fat intake, a powerful factor limiting demand a decade earlier, seemed to have disappeared.

Normally, large changes in demand would not be expected from a mild, short recession, even one with a somewhat sluggish recovery. However, a return to such consumer exuberance seems unlikely. In addition, consumers have shown themselves to be fickle in recent years, leading to the real possibility that the products showing strong demand before the sobering events of late 2001 may not be those to which consumers return. Lastly, demand for dairy products will be more shaped by restaurateur reactions to economic changes than ever before. Changes in menu offerings, portion size, and pricing policies will be very important.

Alfalfa hay supplies continue to be a nagging problem for the western dairy industry. Since 1997, almost all of the dairy-quality alfalfa produced west of the Rocky Mountains has gone to dairy cattle, horses, or exports. The West has boosted alfalfa production in response to higher hay prices, but hay remains a more critical factor in the expansion of the western dairy industry than it was in the past. If alfalfa supplies were to become a major hindrance to further expansion, future supply shifts could be significantly affected.

Replacement heifers have become a substantial issue. The heifer shortage has reached the point where farm expansions are being inhibited by a lack of heifers and average week-old heifers are worth as much as a slaughter cow. To some extent, the shortage of replacement heifers is a result of the western dairy industry suffering the pain of its own success, since the Western share of the herd has become too large to support its traditional heifer deficit. However, the broader issue is whether the high price of heifers will push out those operations, regardless of region, that either over-cull or squander the potential to produce heifers with high genetic potential. We can provide about 30-32 replacement heifers per year for every 100 cows in the milking herd. What will be squeezed out is those herds, for example, that produce only 20 acceptable heifers or that have a long-term annual culling rate of 40.

In 1973, milk per cow fell below a year earlier. Even though the weakness was caused by a small fraction of producers over-reacting to very high protein feed prices, this decline was a major source of discussion because such a dip had not occurred in the period since World War II. The next dip in 1984 was caused by the Dairy Diversion Program and also counted as a quite abnormal event. Yet more recently, decreases (on a daily average basis) have occurred in 1996 and in 2001 in the absence of extreme circumstances. Growth in milk per cow has resulted from a combination of genetic improvements, improved management, better technologies (including bovine somatotropin in recent years), better feeding, more feed, and exit of weaker producers and their replacement by farmers with higher herd averages. The first four factors are certainly still in place. However, it is no longer possible for many farmers to boost milk per cow by simply feeding more grain because they have already neared the limits on the amount of starch in the ration. In addition, the proportional gains in average milk per cow from structural change are less than at one time. The evidence for diminished average gains in milk per cow is suggestive but limited. What does seem clear is that growth in milk per cow is less automatic than it was at one time.

Uncertainties for International Markets

Similar uncertainties for international dairy markets include the ripple effects of the U.S. economic weakness on other countries, particularly East Asia. Many of these countries recovered from their own economic troubles only recently. Lower demand for goods by Americans might upset still-shaky Asian economies with significant implications for demand for milk powders. Even a modest shift from whole milk powder to skim milk powder could have a significant impact on international butter markets.

The EU is likely to be buffeted by a number of conflicting forces. As the largest exporter, changes in EU policies and internal markets could dramatically alter international markets. The EU population is aging even more rapidly than the U.S. population. Immigration provides the major source of increase in food demand, but many of the immigrants to Europe come from cultures without a tradition of heavy dairy consumption. In addition, demand for skim milk powder for feed continues to decline, if somewhat erratically, because of a downtrend in veal demand and greater use of whey products in veal feeding.

EU policy is facing some serious challenges. Popular support for traditional policies aimed at food sufficiency and rural social stability probably has waned somewhat. On the other hand, support for policies related to environment, animal welfare, food safety, and "traditional" methods of production is much stronger than in North America. In addition, major policy adjustments probably will be needed to accommodate the entry of new members including Poland and the Czech Republic.

Argentina boosted its milk output by more than half in a decade, surpassing Canada and becoming almost as large a producer as Australia or New Zealand. Much of this production was exported to Brazil and therefore did not draw much attention internationally. Unsettledness in the Brazilian economy and the virtual collapse of the Argentine economy recently sent large amounts of these products looking for a home. Argentina's potential for low-cost milk production is undisputed. However, the future course of the region's supplies, demand, and policies is highly uncertain.

The re-writing of the rules of international dairy trade by negotiations under the Doha Agenda reigns as the most important uncertainty for the small, policy-distorted international dairy markets. The impact could be much greater than the first steps taken by the previous Uruguay Round Agreement on Agriculture.